Ryan Chouest daily data transmission and report

Period covered: 1000 hrs 07/08/2010-1000 hrs 07/09/2010

70.190 – Nautical miles covered

Vessel science party:

Xiubin Qi (Xiubin.Qi@csiro.au)
Stephane Armand (Stephane.Armand@csiro.au)
Andy Revill (Andy.Revill@csiro.au)
Charlotte Stalvies (Charlotte.Stalvies@csiro.au)
Tosin Majekodunmi (Tosin.Majekodunmi@bp.com)
Curtis Walker (cwalker@entrix.com)
Michael Griffin (Griffinmi09@students.ecu.edu)

Contact details:

+ 1 337 761 9830 – Sat phone
+ 1 337-761-9830 – Broadband phone ship office 1
+ 1 337-761-9827 – Broadband phone ship office 2
+ 1 337-761-9826 - Broadband phone ship bridge

Cruise notes:

The last of the planned vertical cast locations along the semicircular track concluded about 1056 hours earlier. Tide lines encountered made it possible to spot some sea life (sharks, fish, and jelly fish). An additional last vertical cast was set at 1958 hrs when the Ryan Chouest reached 29°49.817'N, 88°03.587'W within the study area of Auburn University's Dr. Szedlmayer.

Science results and preliminary interpretation:

Fluorometry results

Poly aromatic hydrocarbon levels from the Chelsea sensor are low through the track travelled (Figure 2). The Trios flourometry shows generally minimal levels with the exception of a segment, roughly 12 nautical miles that begins where orange mousse was observed, indicating low levels (Figure 3). Lastly, the Contros sensor results show variability from minimal to low-medium (Figure 4).

The result from the vertical cast deployed at 1958hrs at N29 49.817, W 088 03.587 is shown in figure 5. Both Chelsea and Trios show slightly higher response to the subsurface water than to the water more than 10 meters below surface. Noting that Contros show higher noise level and the reading should be interpreted with caution. More quantitative information on the water quality will be provided once the GCMS analysis of the collected water samples is completed.

Surface Observations

Brown mousse and silvery surface sheen spotted at 1150 hrs about 28°59.452'N, 88°07.225'W (Photo 1). From its initial documented observation point, the brown mousse became a common sight while

heading NE towards the port of Theodore. Particulates of unknown composition, shown in photo 2, were spotted along route at 1340 hrs (29°58.281'N, 88°01.591'W). At 1815hrs, *Ryan Chouest* encountered a tide line along the surface typified by linear patterns of seaweed; some were encircled by a light film of slivery sheen that was not commonplace in the area observed except around the seaweed. A few sharks and several fish were observed within that vicinity. Later along the route, at (29°39.693'N, 88°03.408'W), a school of dolphins escorted the *Ryan Chouest*. The *Ryan Chouest* reached the port at Theodore at about 0600 hrs on 07/09.

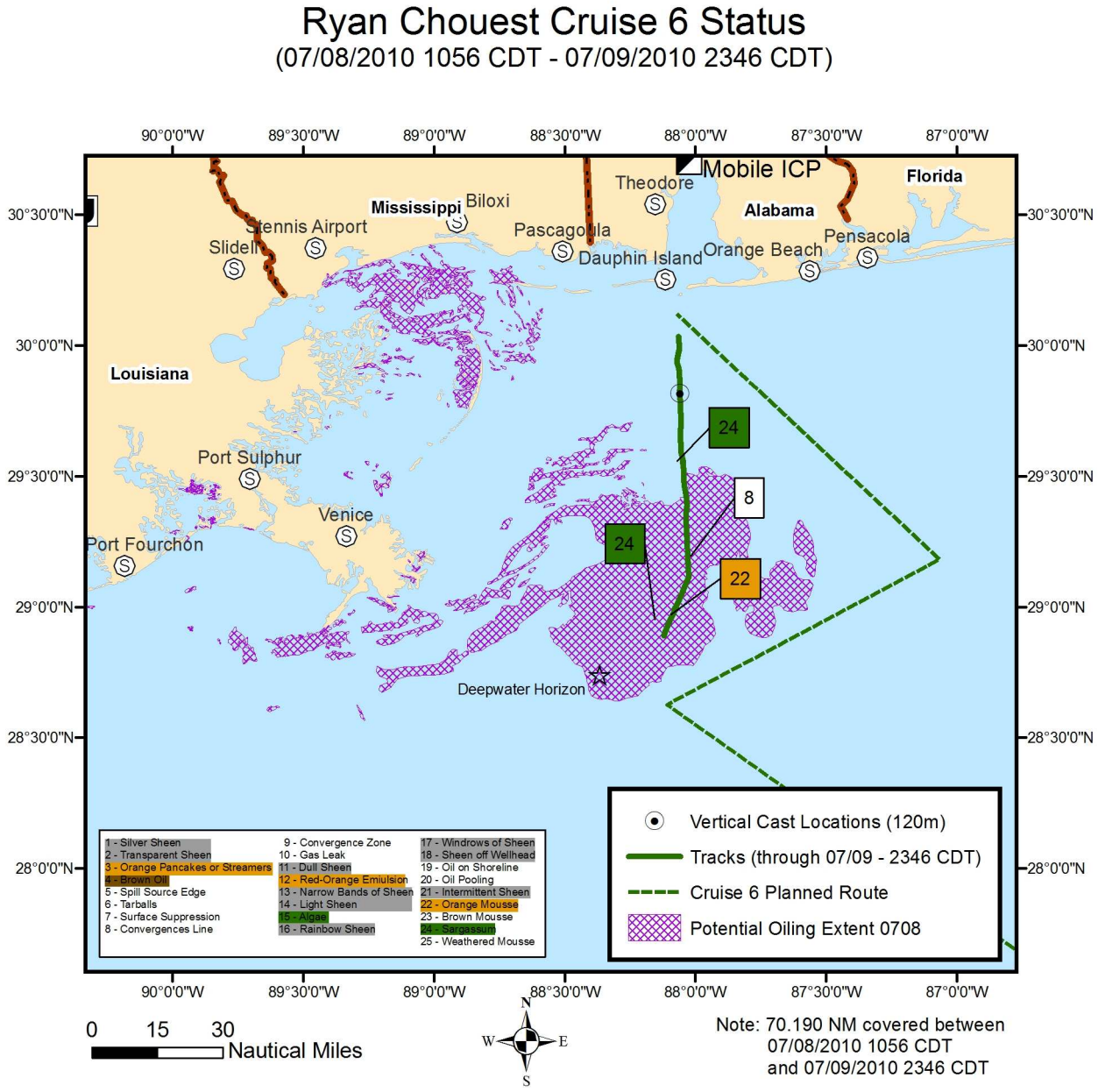


Figure 1. Planned course plotted for Cruise 6. Purple shaded area represents outline extent of the slick from 07/02 ERMA composite.

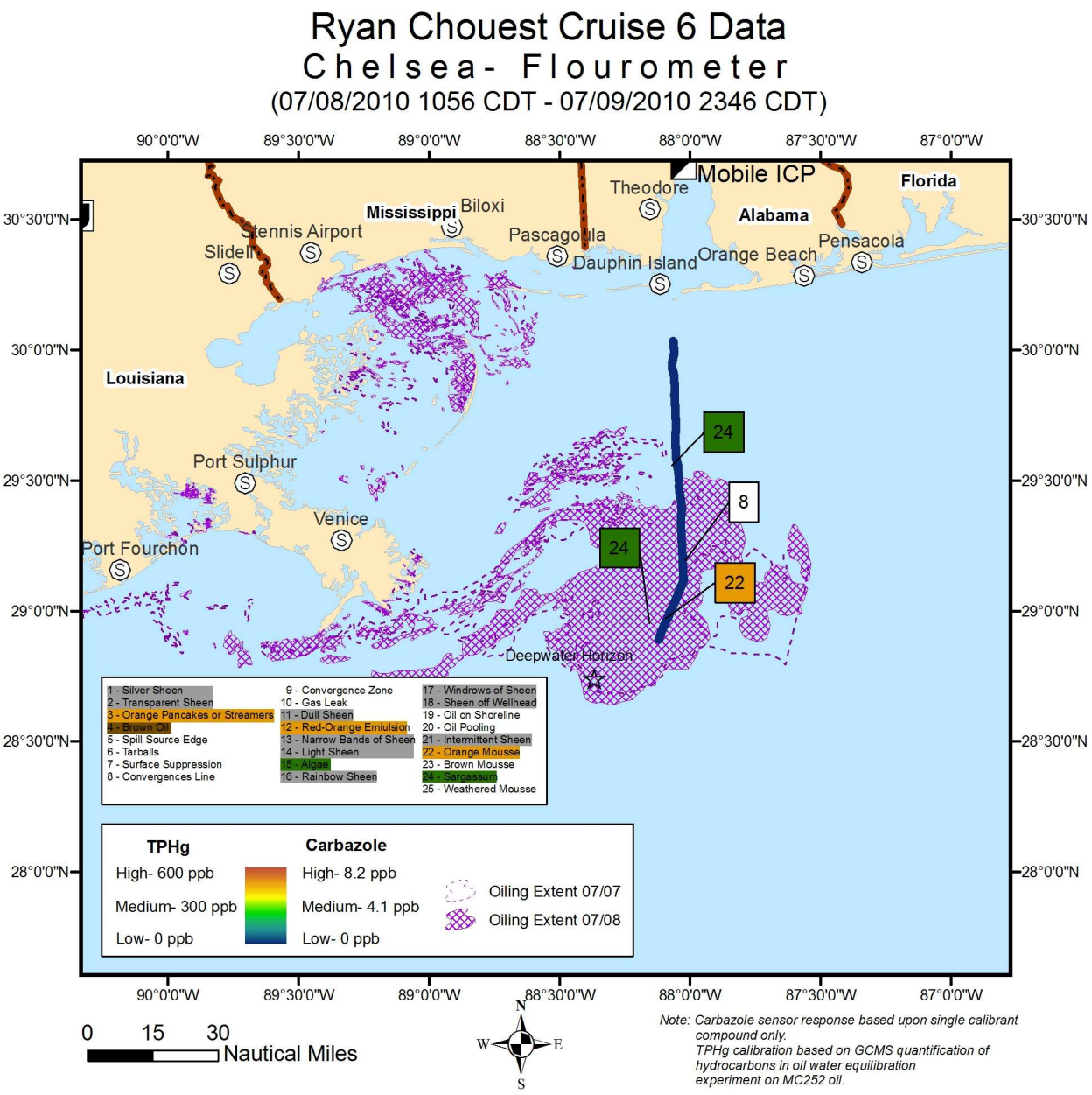


Figure 2. Chelsea fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

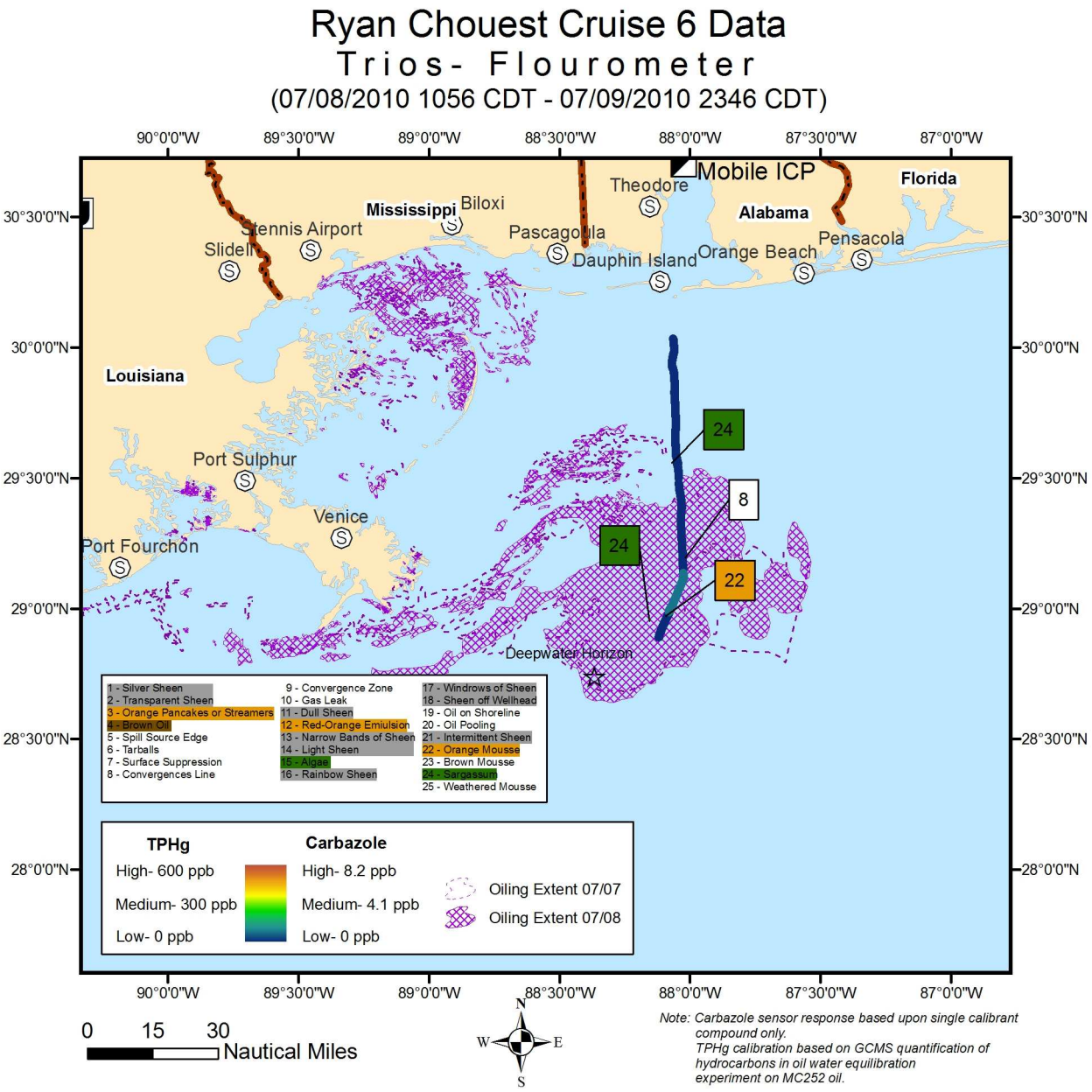


Figure 3. Trios fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

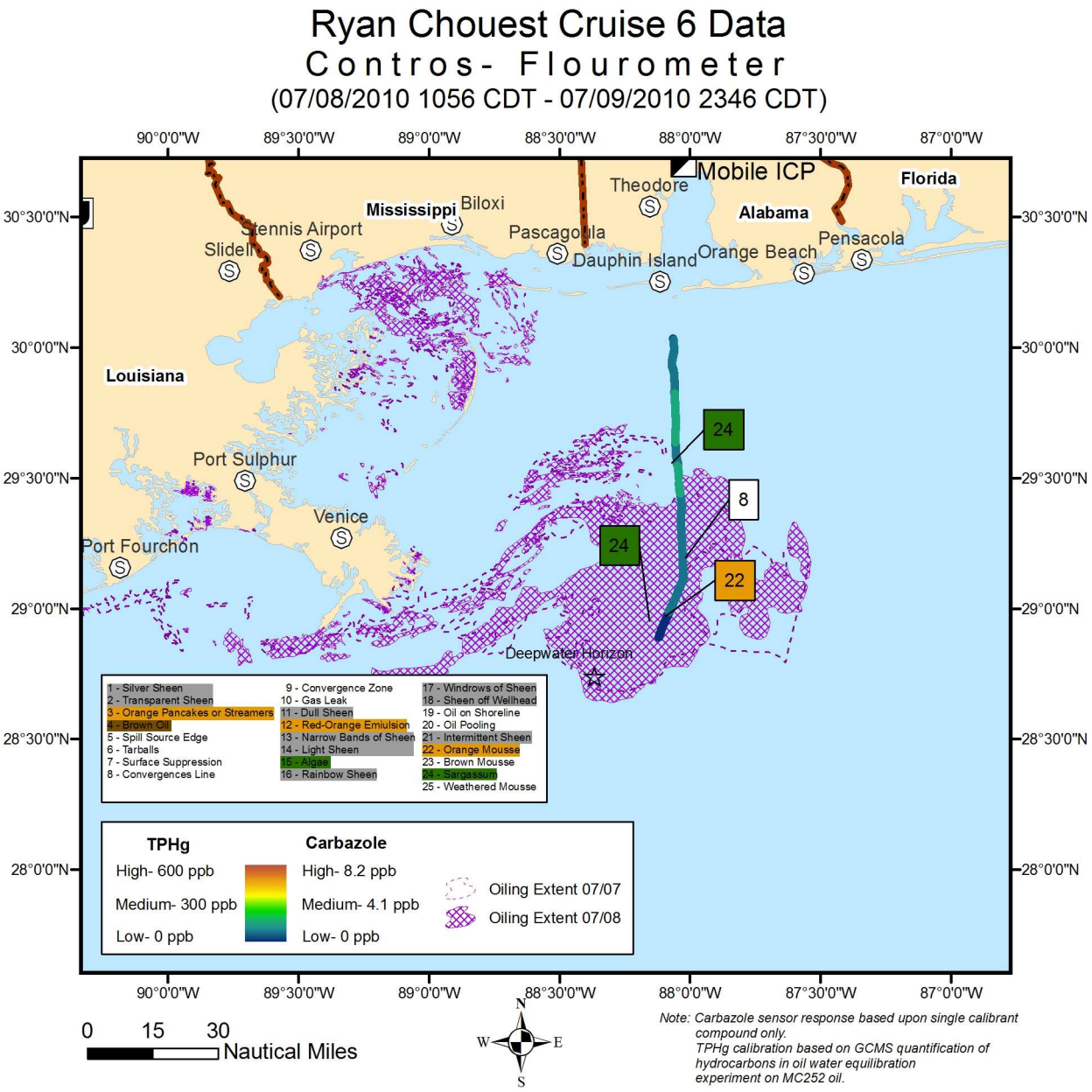


Figure 4. Contros fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

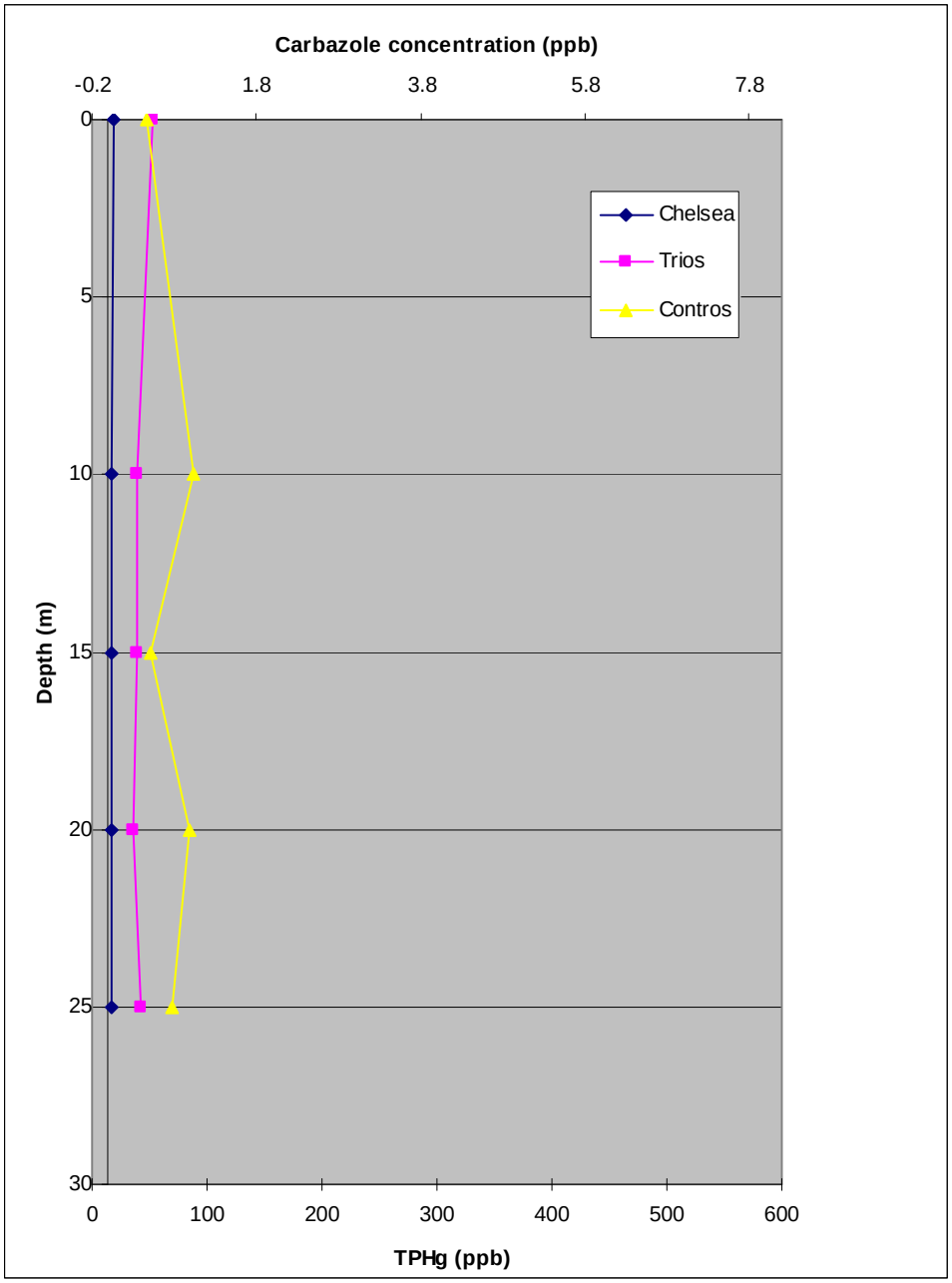


Figure 5. Fluorometer response vs. water depth, vertical cast 1 (N29 49.817, W 088 03.587)

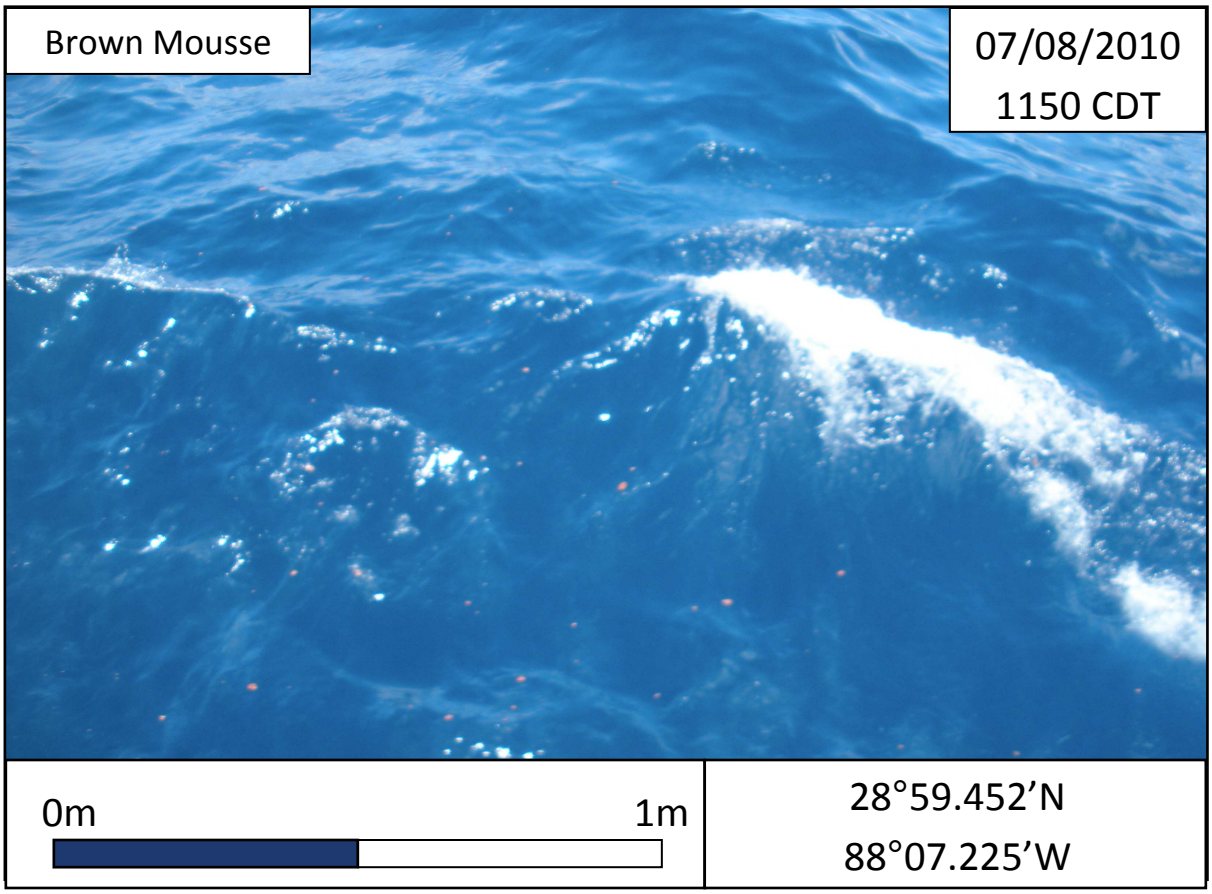


Photo 1: Brown mousse and silvery sheen observed along cruise 6 route.

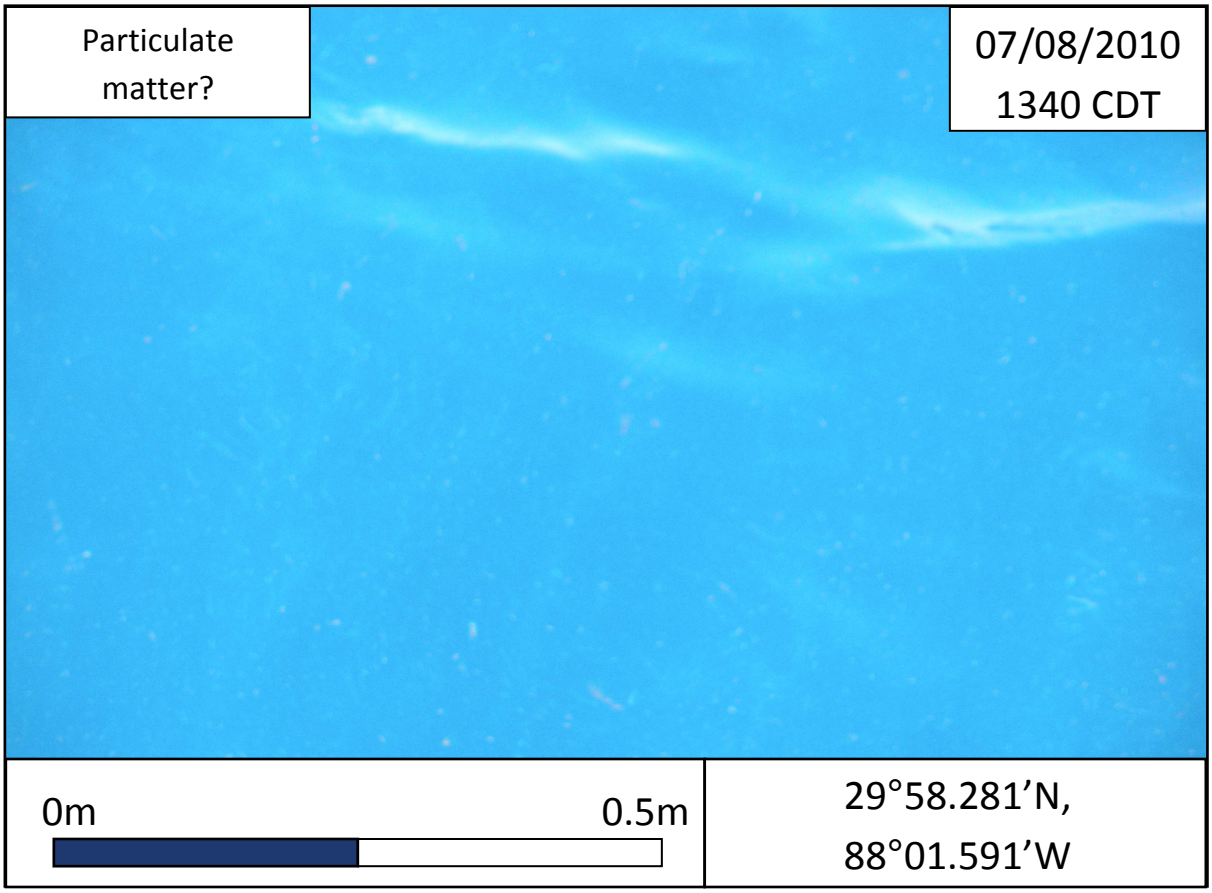
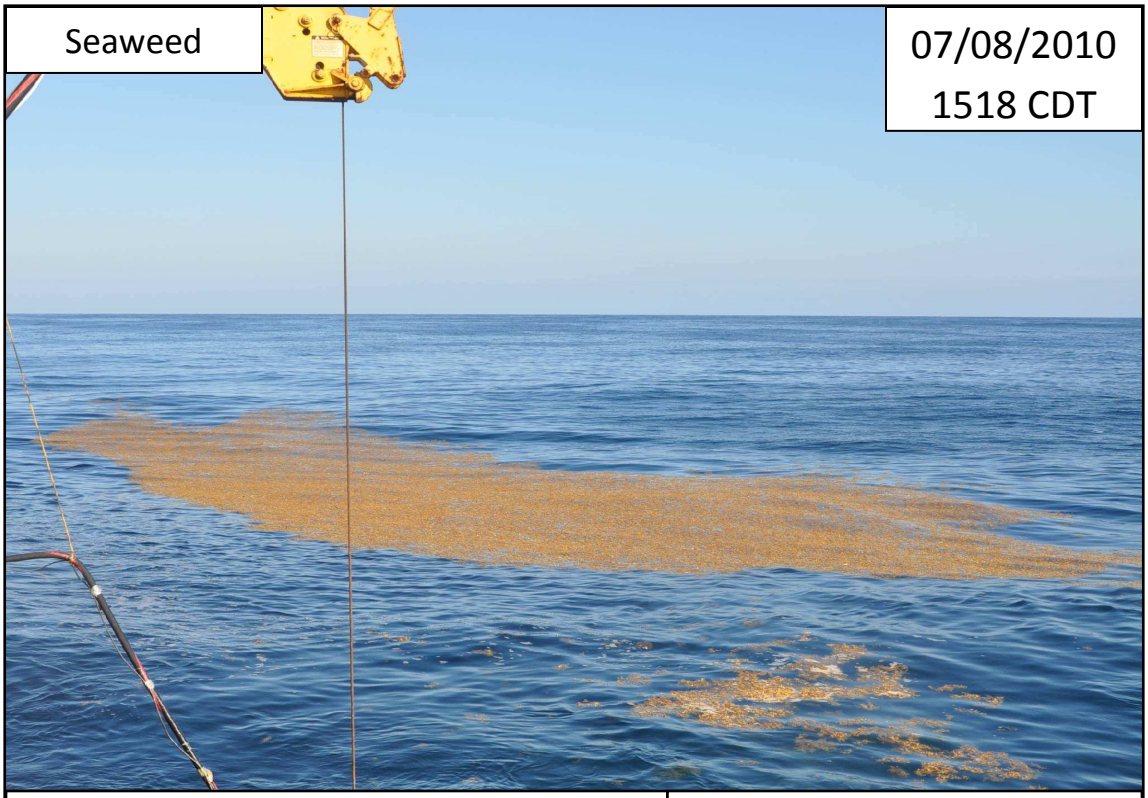


Photo 2: Unknown particulates observed in the proximity of brown mousse location.

Seaweed

07/08/2010
1518 CDT



0m 10m 20m

29°57.520’N,
88°01.210’W

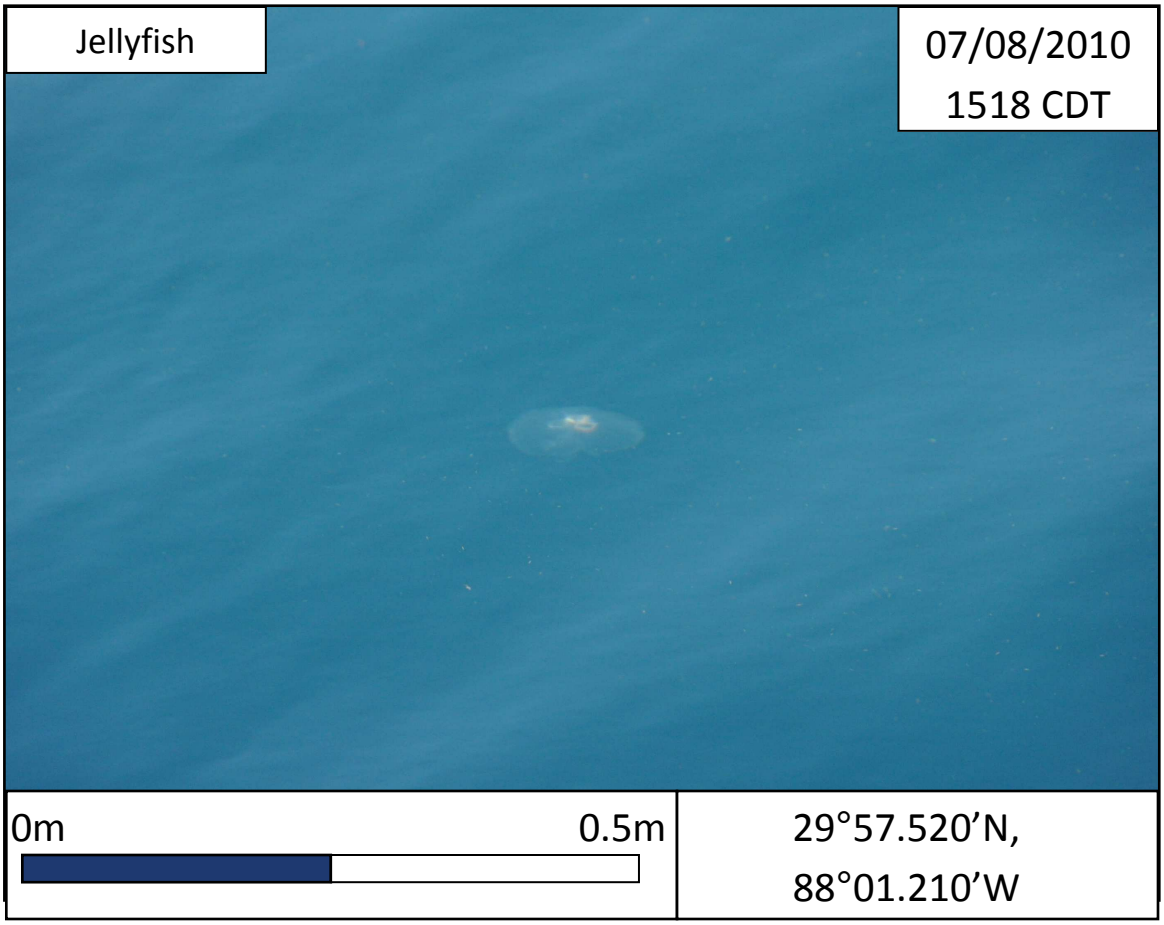


Photo 3: Jelly fish spotted within the vicinity of the seaweed pattern along tide lines.

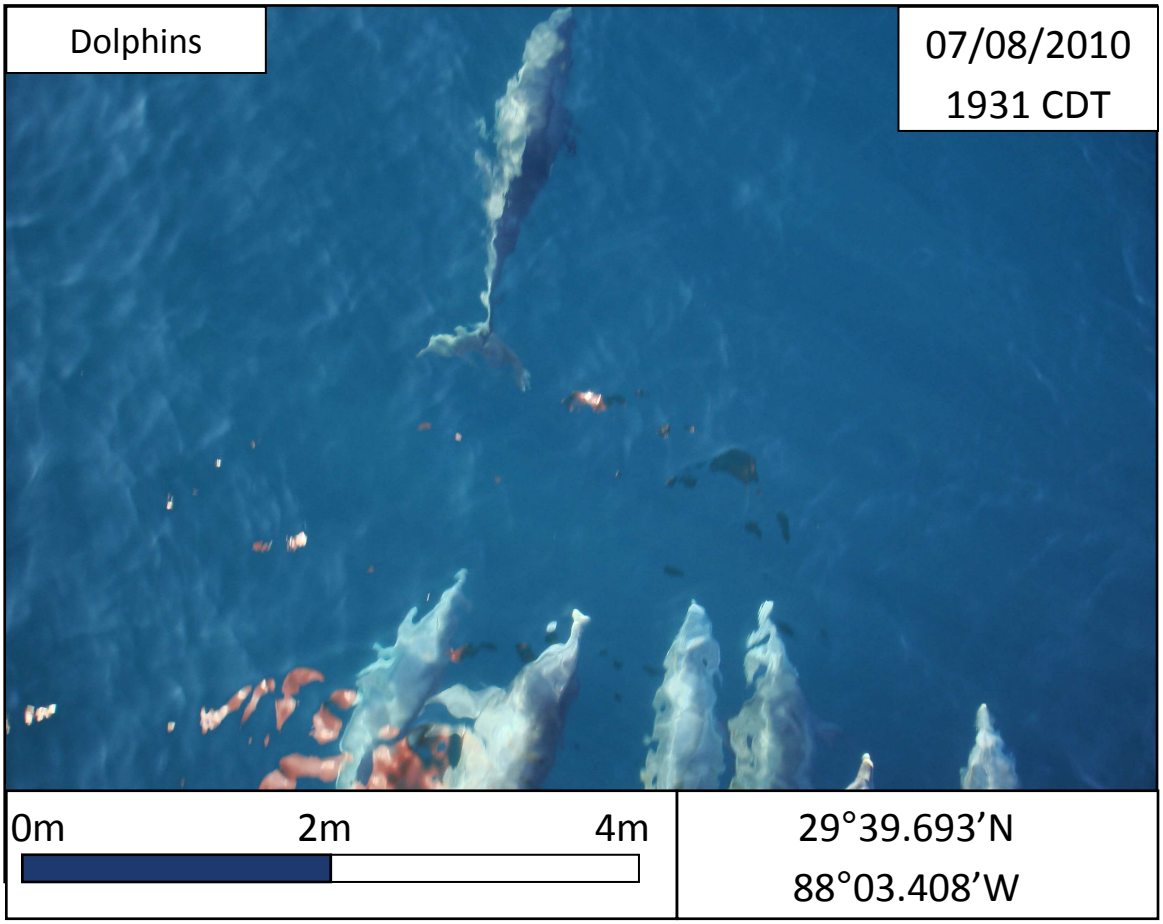


Photo 4: A school of dolphins escorting the *Ryan Chouest* while heading north towards Theodore, AL.

Problems/operational issues:

No particular issues arose but persisting ones (Internet/phone).

Planned activities for next 24 hours:

Stay on course with the revised Cruise 6 route and head towards the port at Theodore, Alabama for internet/phone issue resolution, echo sounder installation and possible addition of C&C crew.